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Brazillian reality

- Federal government project (Ministry of Science, Technology and Innovation);
- Provide publishing structure to Brazil's biodiversity data;
- Build an institutional Portal;
- Build a biodiversity data explorer;



Assembling of the development team

- Assembled before comprehension of the full size of the problem (May 2013);
- Assembled without full grasp of the required effort/schedule;
- Very small dev team:
  - Francisco, Gadelha, Júnior, Daniele, Maira, Danny;
- New to each other;
- No previous biodiversity experience.



Development strategy: Software reuse!

*Given the previous conditions, the chosen strategy to start implementation was to **reuse open source software**!*

Hence, the first step was to survey and assess available options!



Portal survey and assessment



Capacity plan strategy: GBIF's Mentoring Program

With Brazil's interest in becoming part of GBIF network, opportunity came to enter a **mentoring program**!



SiB Colombia

- Geographically close
- Language similarity
- Consolidated network
- GBIF experience
- Strong business comprehension
- Open source dataportal
- Support availability

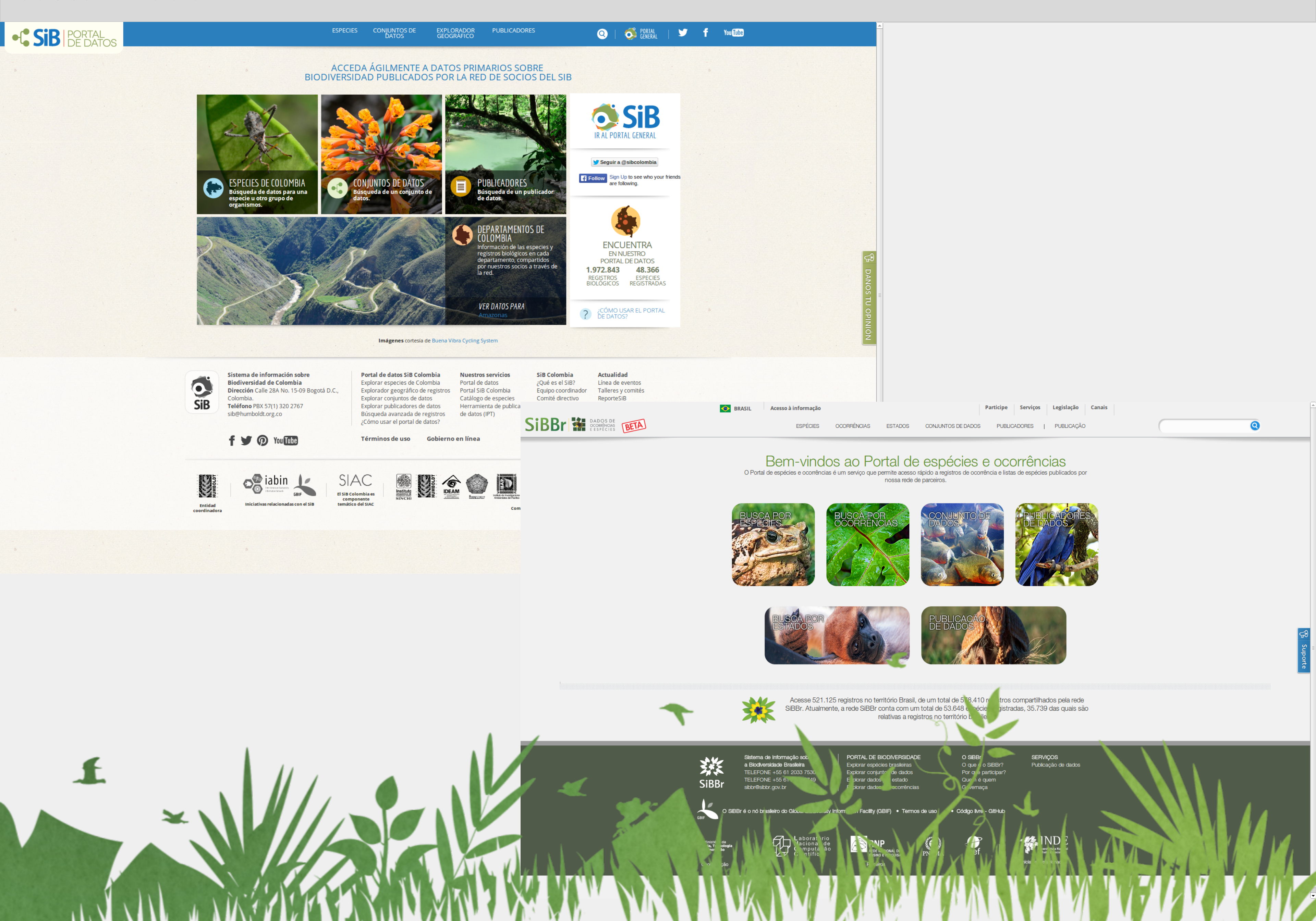


Customization of Sib Colombia

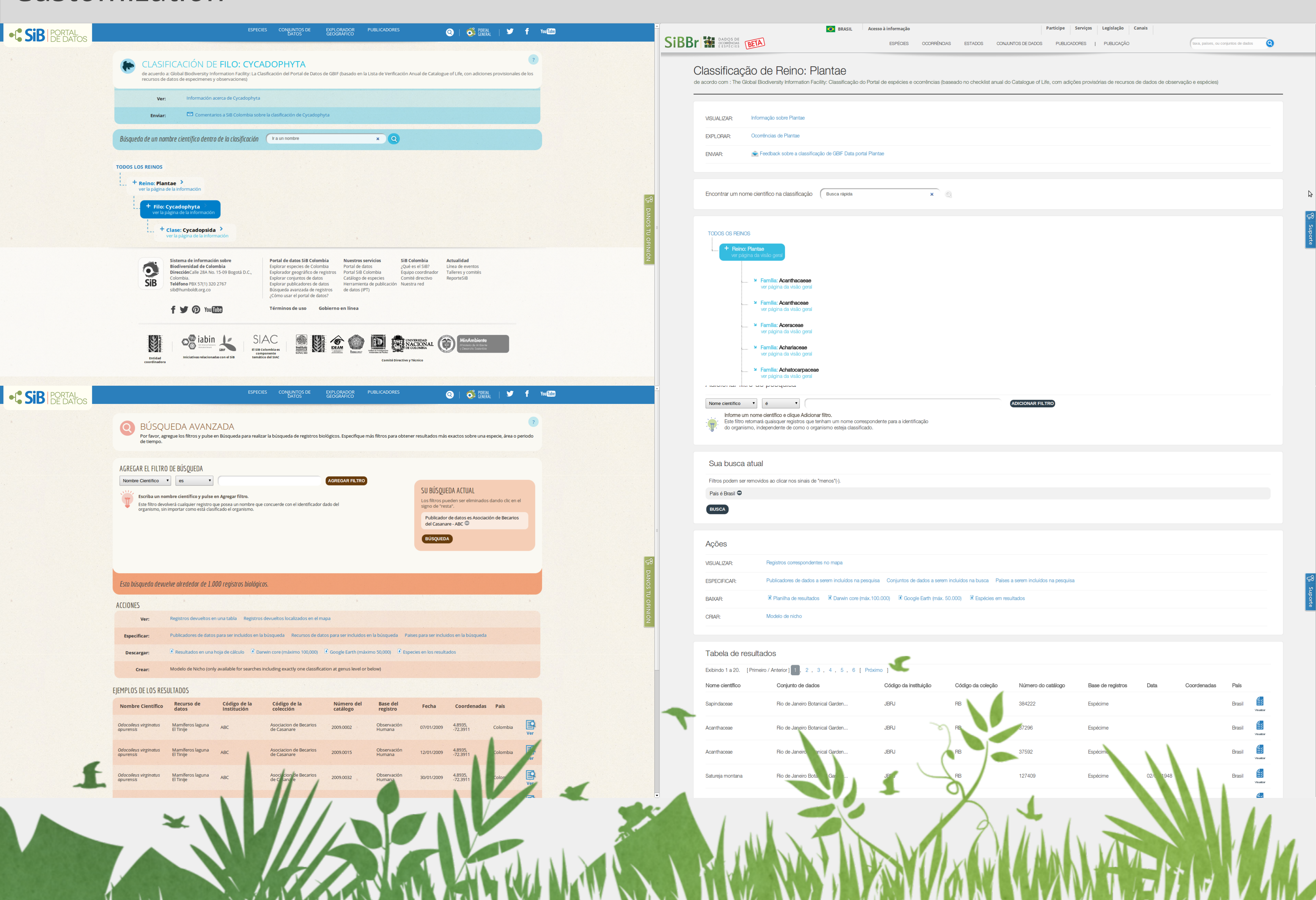
- *Internalizing the code (Forking GitHub projects)*
    - *Implement portuguese translation*
    - *Apply customized front end styles*



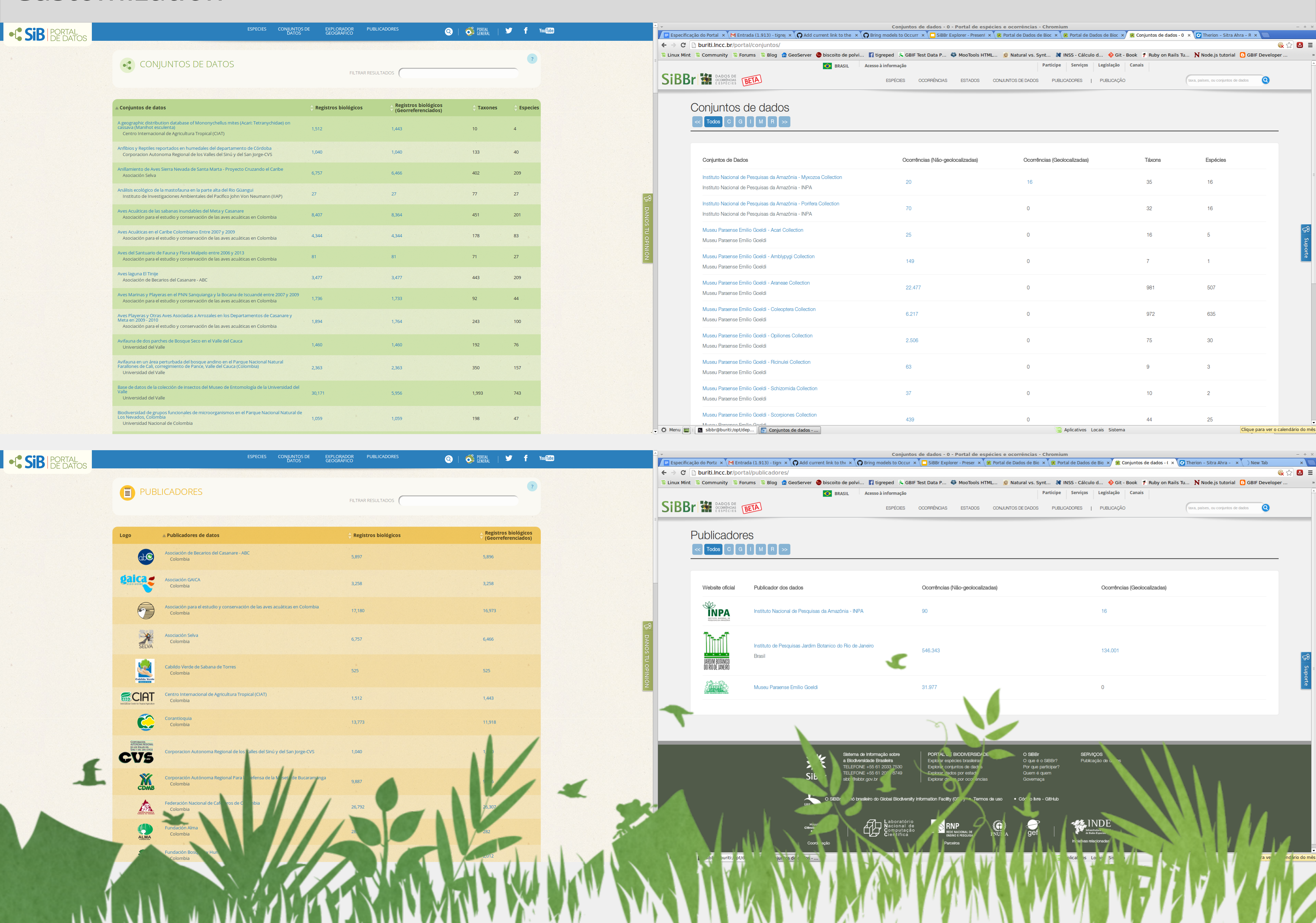
Customization



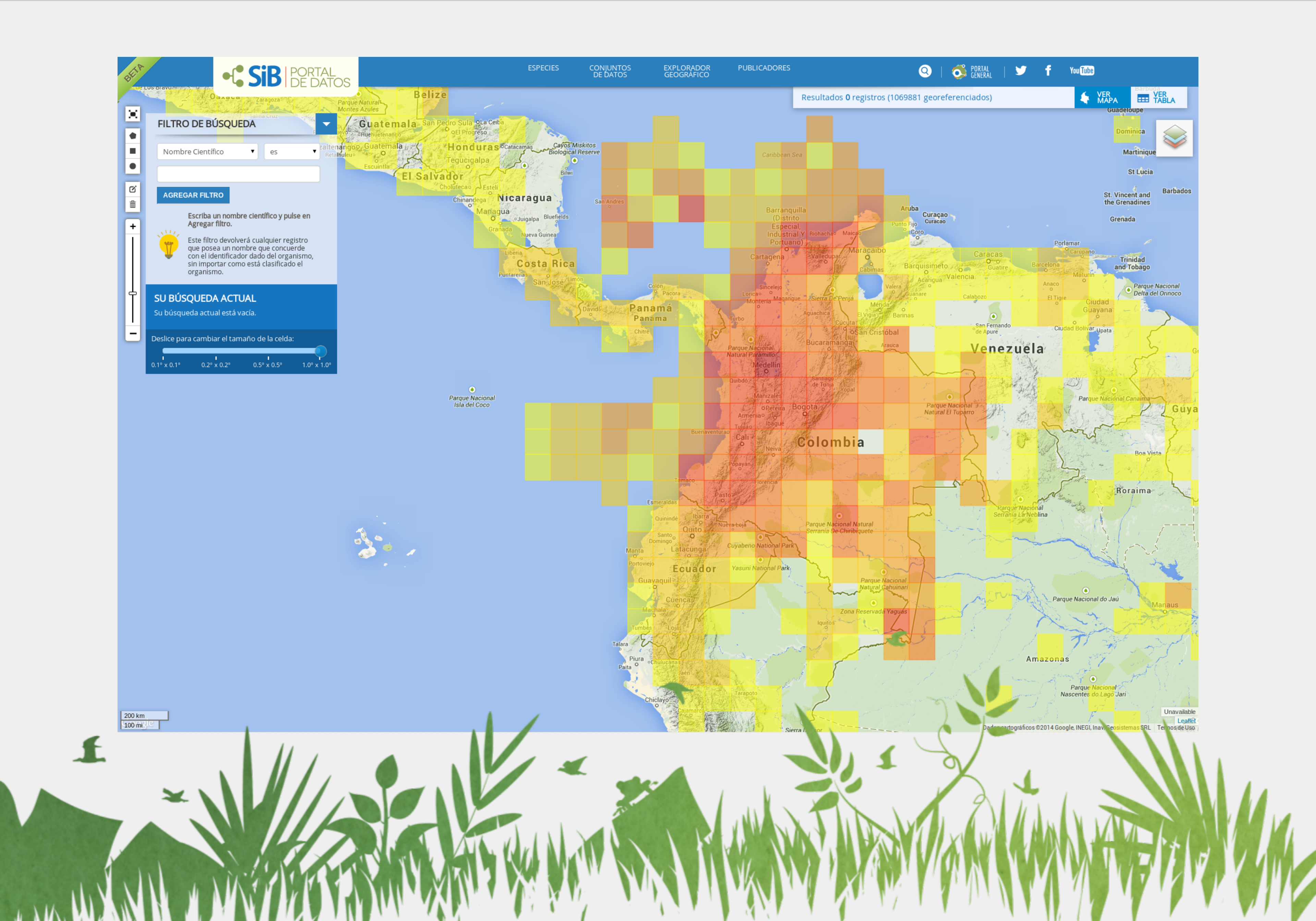
Customization



Customization



Customization



SiB Colombia's dataportal: GBIF legacy

Positive points

- Started getting envolved with the GBIF community
- Familiarization with GBIF's and Dwc-A data model and publishing workflow.
- Great support from SiBCo team
- Good functionalities list
- Great GIS explorer
- Familiarization with some state of the art techniques and best practices from SiBCo, specially on the front end of SiBCo's institutional site and explorer
- Discussion of several data quality processes
- Agreed on the necessity of a new harvesting and indexing tool

Negative points

- Techonogy gap, some non state of the art technologies
- Big application stack
- Big, confuse, outdated database data model
- Inheritance of old non documented code that was no longer useful
- Too much code to do litte
- Slow code learning curve
- Dependency on the HIT, also no longer supported
- Small integration to the Visual Explorer (Necessity of data redundancy from dataportal database and SibCo's GIS explorer database)
- Little support from GBIF



Halt! Review team mid/long term strategy for process longevity



- *Release a more controllable/stable data portal*
- *Change harvesting/indexing process*
- *Define Brazil's requirements*
- *Improve development pace*
- *Update technologies*

Basic Requirements for SiBBr

1. Search occurrences with filters
2. Navigate through the database's generated taxonomic tree
3. Display in the GIS explorer a heat map for geographic intensity of occurrence for registers with coordinates
4. Display in the GIS explorer points for each occurrence with coordinate
5. Select occurrences by geographic area
6. Download search/filter results
7. Display statistics about a dataset or filtered/selected set of occurrence
8. Browse through publishers
9. Browse through datasets
10. Display instructions about the publishing process
11. Assure users accept data terms before navigating
12. Send feedback to data publisher
13. Show other informations about a given name



Canadensys

- Autonomous stable harvesting/indexing process
- GIS explorer integration to the data portal
- Excellent support and communication
- Reasonable application stack
- Good list of fucntionalities
- Updated technologies
- Slim data base model
- Good documentation
- Modularized code
- Open source

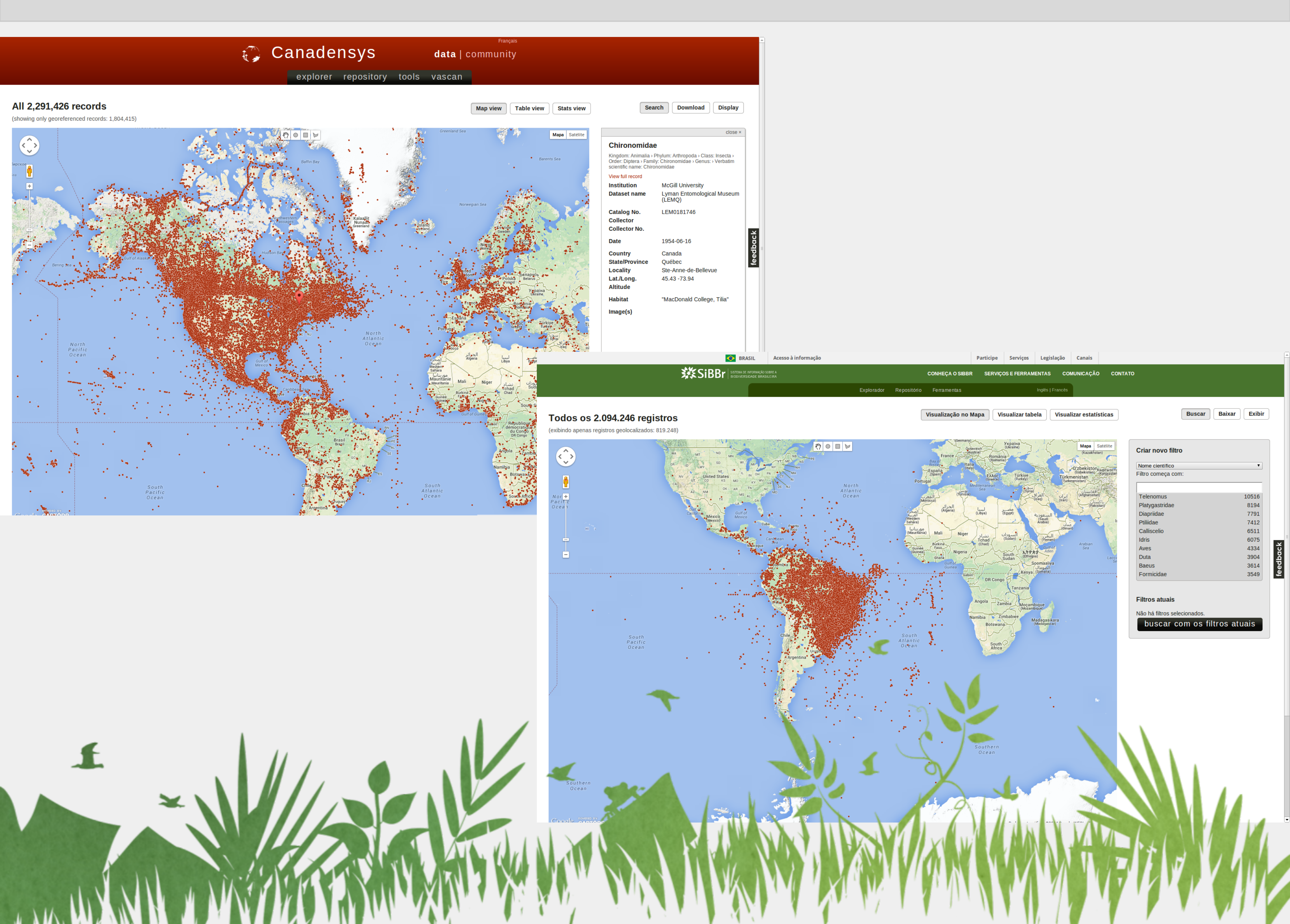


Customization of Canadensys

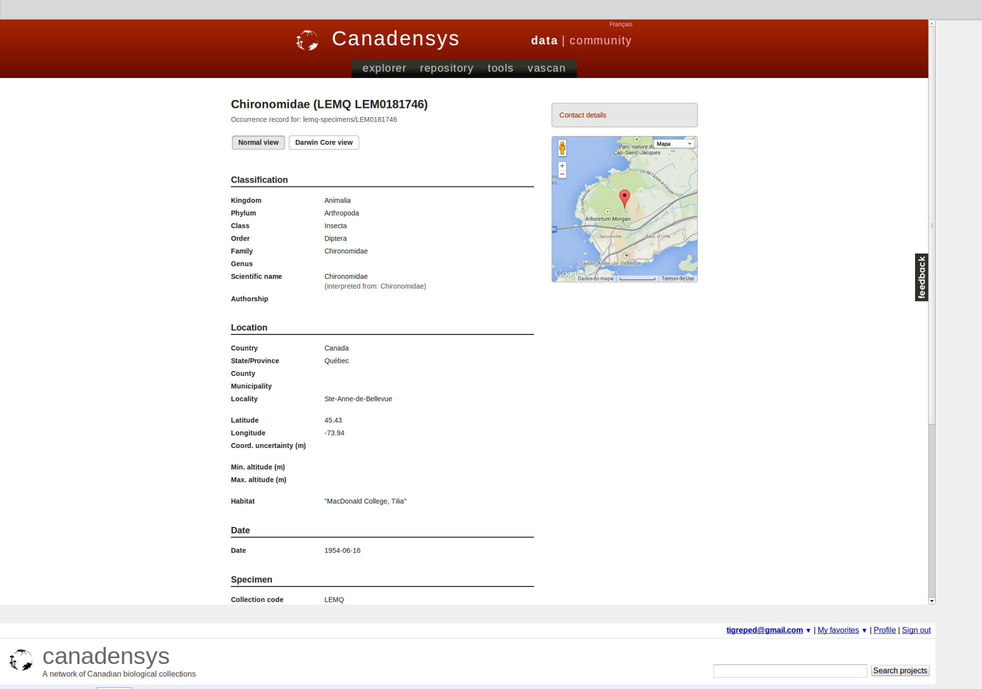
- *Internalizing the code (Forking GitHub projects)*
- *Implement portuguese translation*
- *Apply customized front end styles*
- *Add SiBBr specific requirements*
- *Improve common requirements*

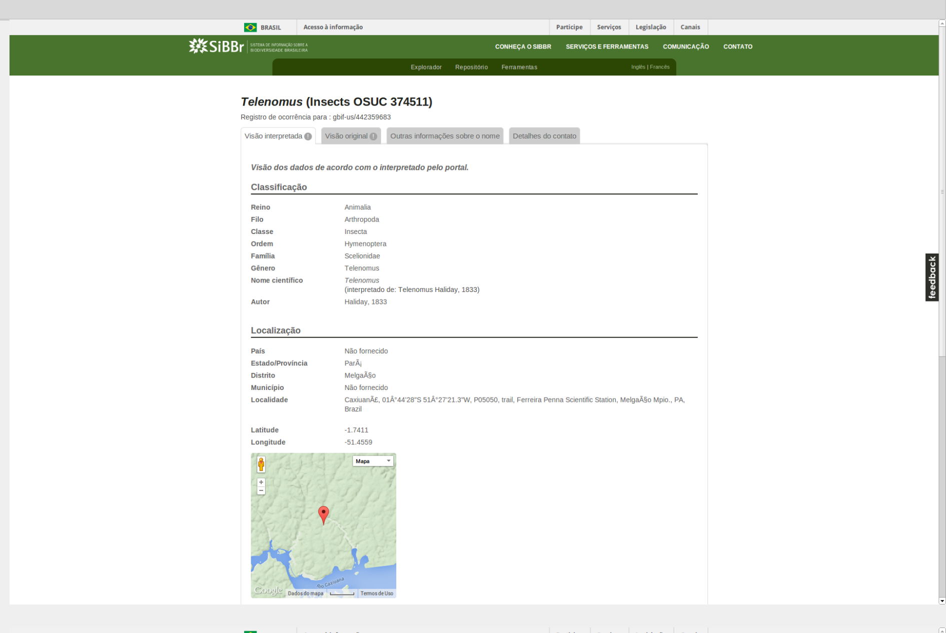


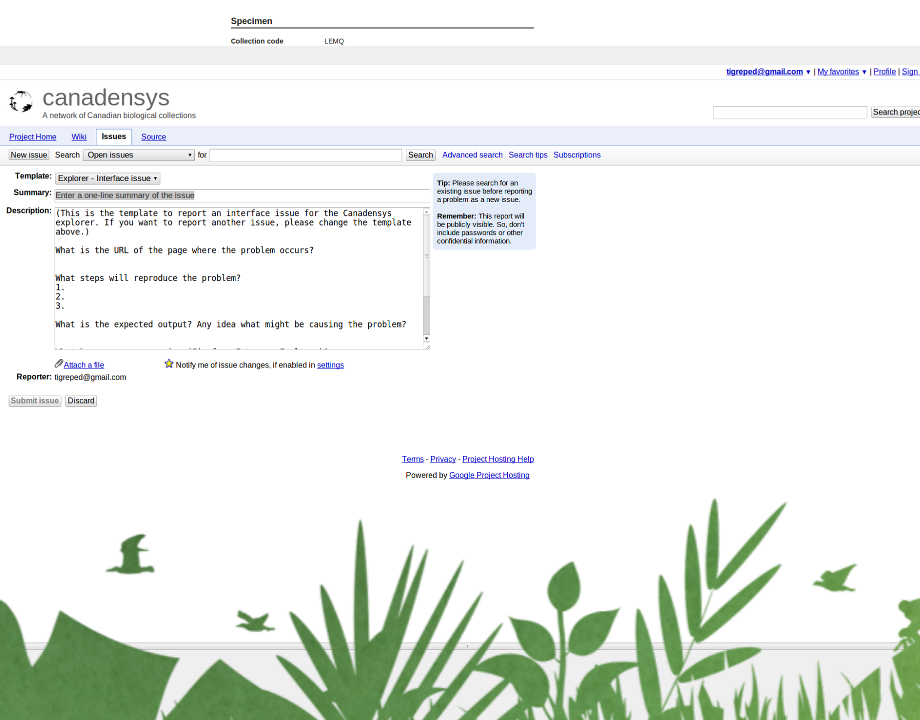
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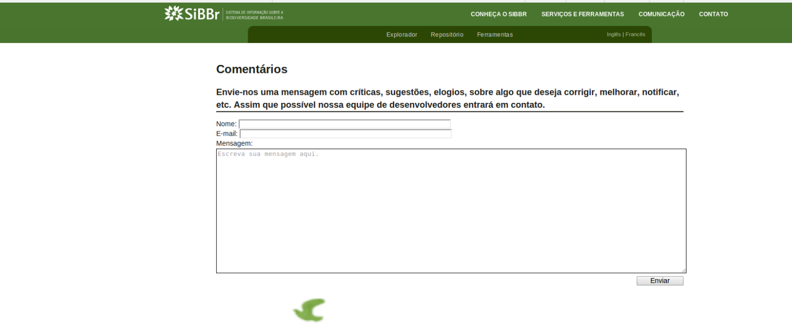


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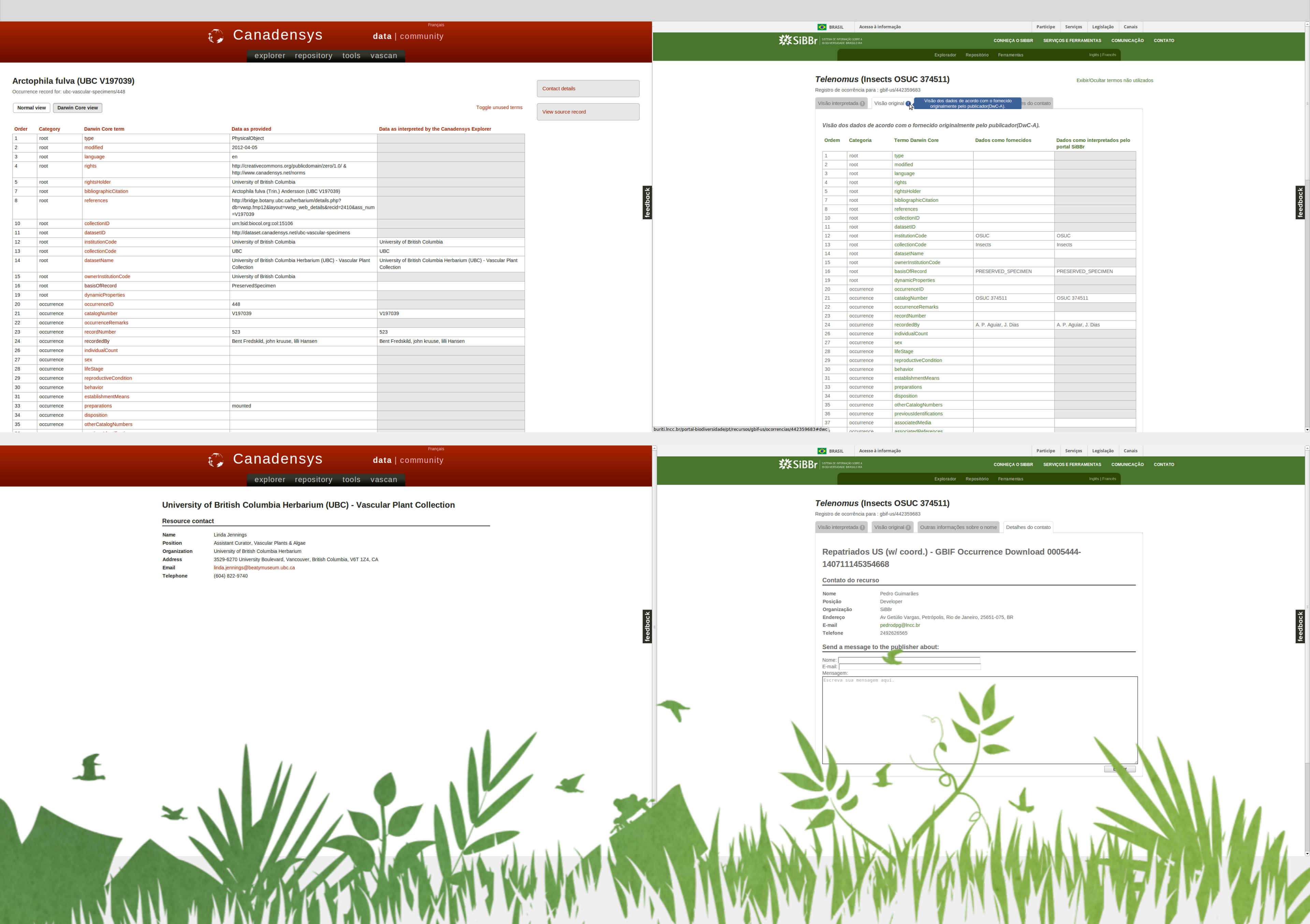




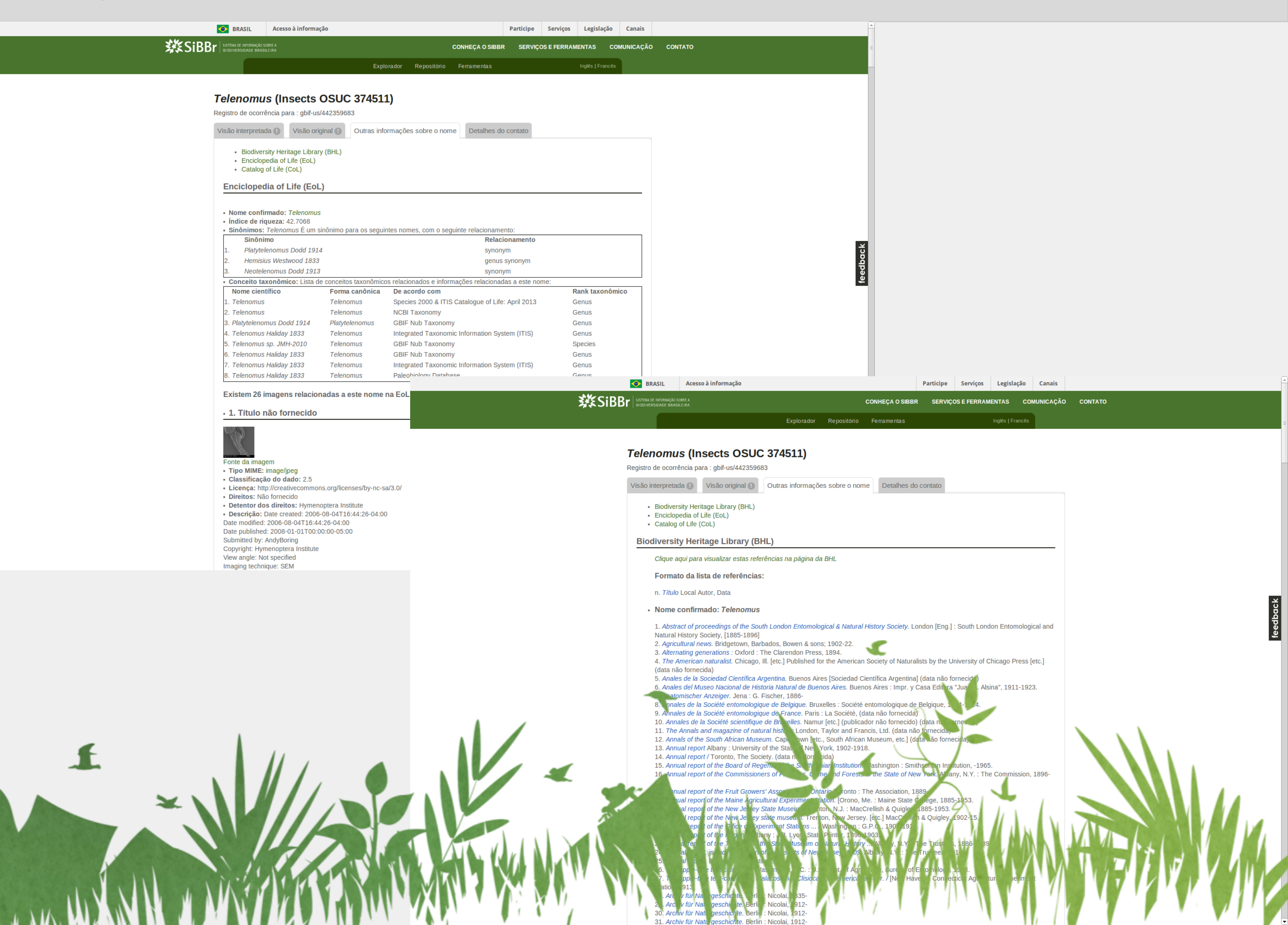




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Status: Customization



Future: Internally

- Release data portal (explorer)
- Release institutional portal
- Add data quality report and tools to the portal
- Implement full list of requirements



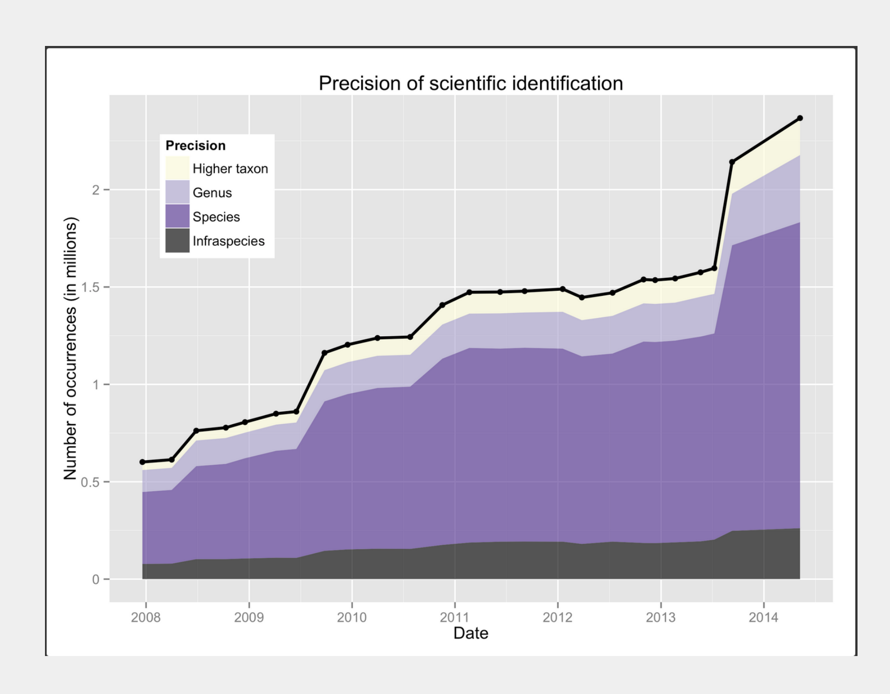
Future: Externally

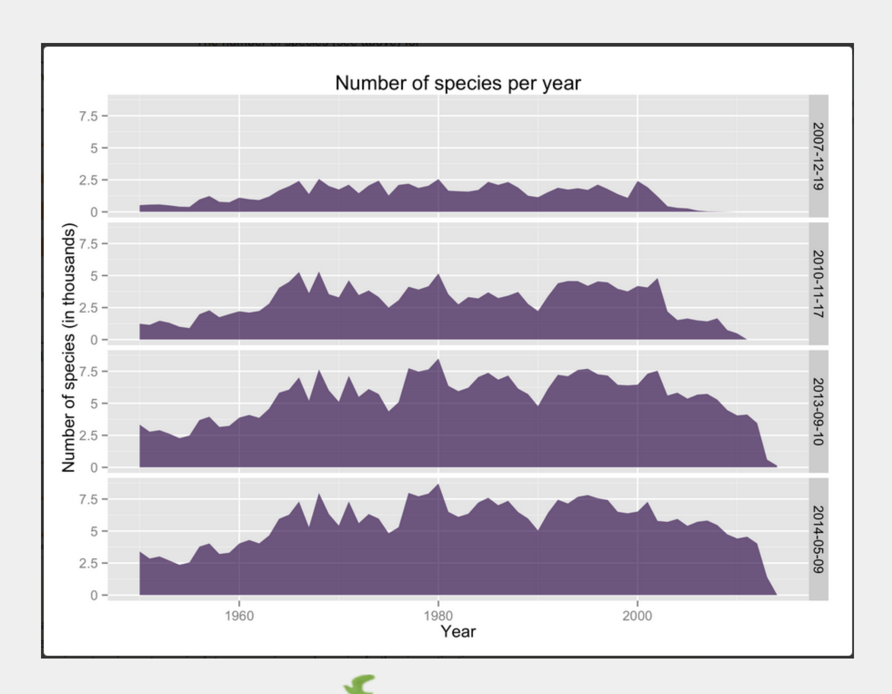
- Cooperate on the development of a new community harvesting and indexing tool;
- Cooperate in definition, improvement and implementation of data quality best practices and tools;
- Implement cherry picked functionalities from other portals to the current code ALA, GBIF, SibCo, etc.



Future: Examples

- GBIF analytics

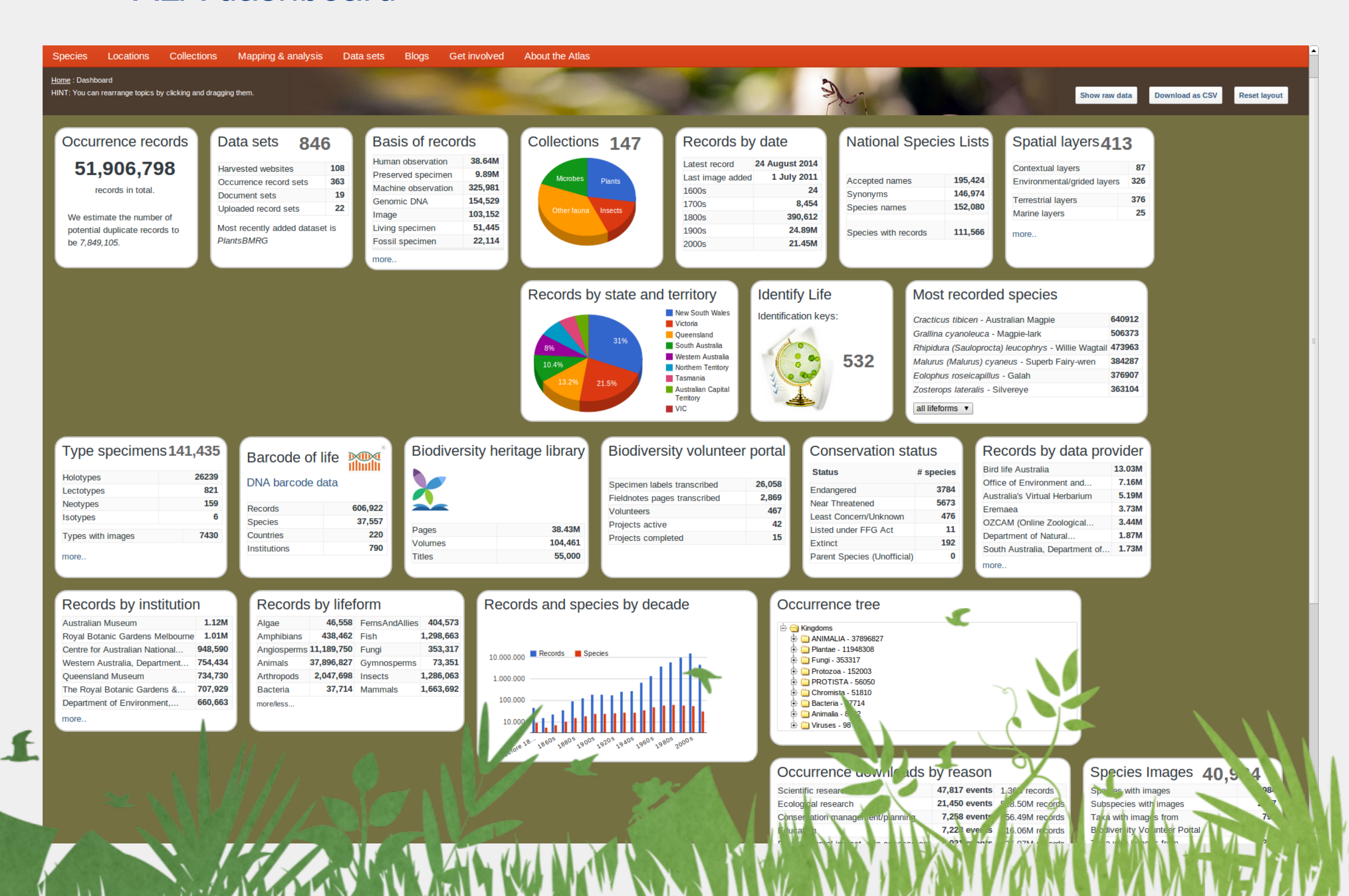






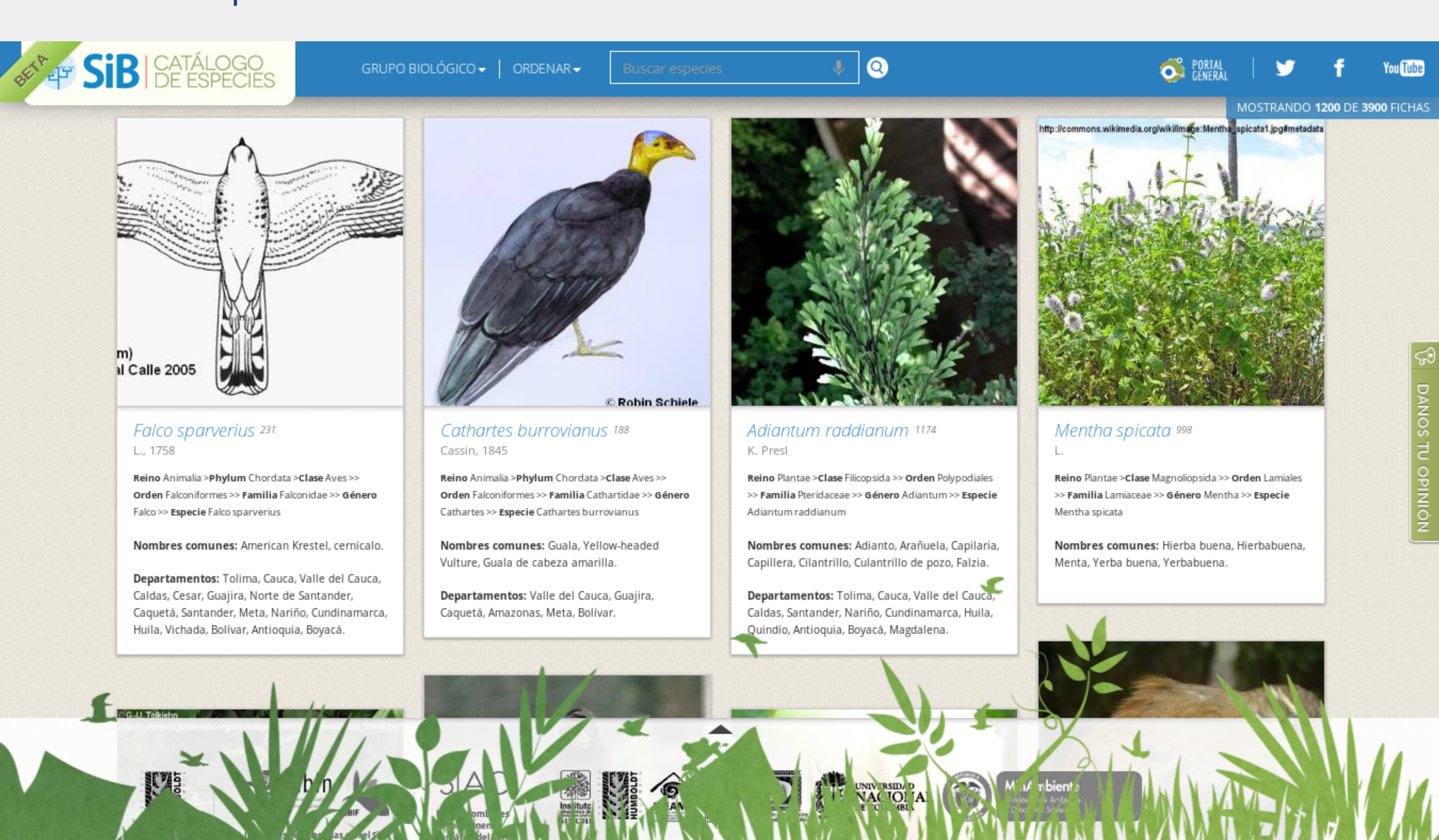
Future: Examples

- ALA dashboard

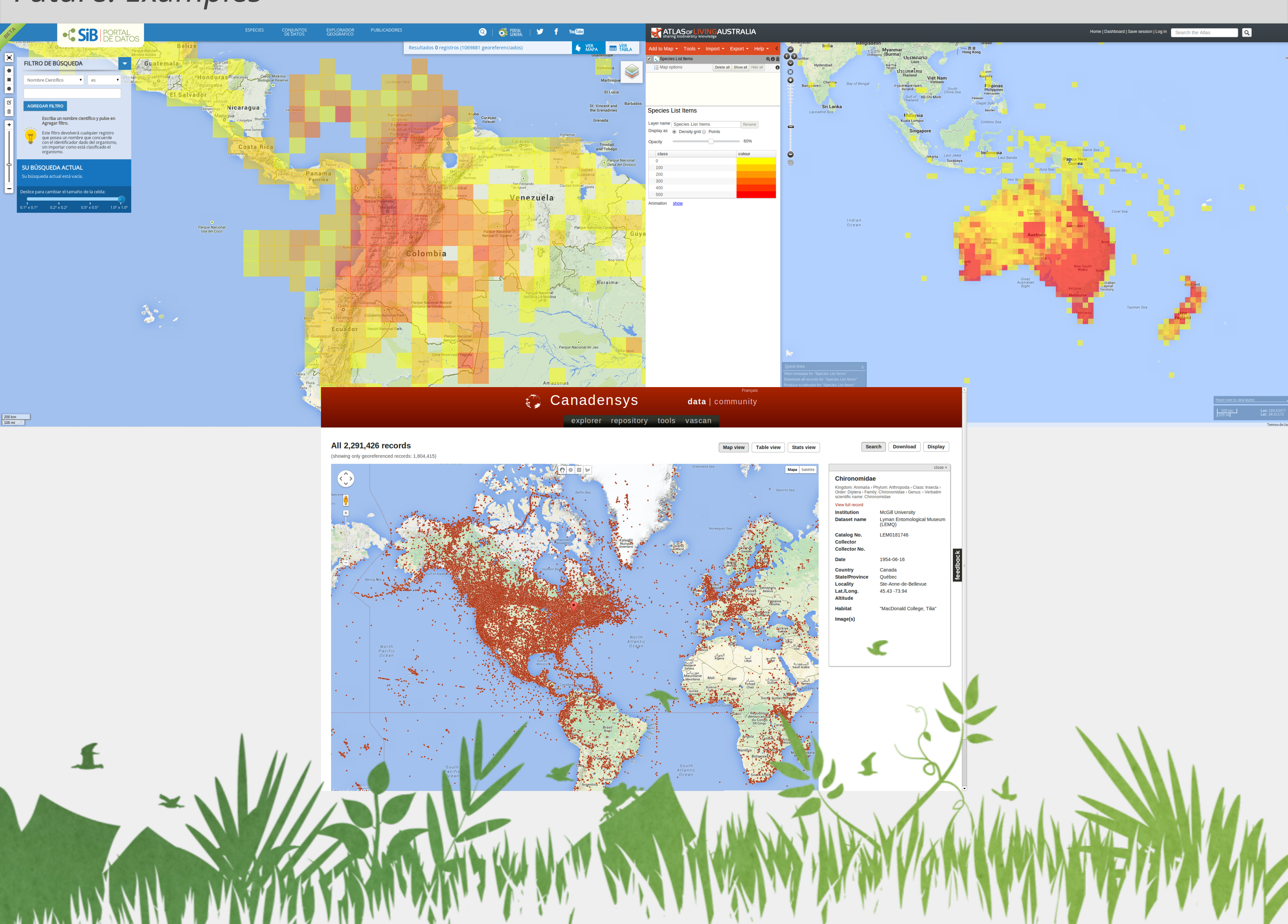


Future: Examples

- Species files



Future: Examples




Akka Angular API APIs Barcode Biodiversity CartoDB
Catalog Checklist Citations Cluster Core Darwin
Dataset DOI DwC-A ElasticSearch EML Enciclopedia Expert
explorer fact Freemarker Functional GBIF GeoTools GIS GitHub
Gradle Grails Graphs Harvesting Heritage
Horton Hypergraphdb Indexing js Leasflet Library Licences Life list Narwhal
Neo Occurrence Opinions Plinian programming
Publisher Scala sockets Standards Taxa
Taxonomic TDWG tree Validator
Vocabularies Web Windshaft



http://www.sibbr.gov.br

Gratidão! Gratitude! Gracias!

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